

- The scope of the present disclosure includes any novel feature or combination of features disclosed therein either explicitly or implicitly or any generalisation thereof irrespective of whether or not it relates to the claimed invention or mitigates any or all of the problems addressed by the present invention. The applicant hereby gives notice that new claims may be formulated to such features during the prosecution of this application or of any such further application derived therefrom. In particular, with reference to the appended claims, features from dependent claims may be combined with those of the independent claims and features from respective independent claims may be combined in any appropriate manner and not merely in the specific combinations enumerated in the claims.

What I claim is:

1. A data processing system, comprising:
a first processing resource coupleable to a communications network; and
a second processing resource coupleable to said first processing resource;
said first processing resource and said second processing resource configured to establish a communications relationship between them, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.
2. A data processing system, comprising:
a first processing resource coupleable to a communications network; and
a second processing resource coupleable to said first processing resource;
said first processing resource and said second processing resource configured to establish a communications relationship between them; said first processing resource configured to transmit an instruction to said second processing resource for said instruction satisfying a predetermined criterion, whereby said second processing resource is restricted to implementing an instruction communicated from said first

processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

3. A data processing system, comprising:

- 5 a first processing resource coupleable to a communications network; and
a second processing resource coupleable to said first processing resource;
said first processing resource and said second processing resource configured
to establish a communications relationship between them; said first processing resource
is configured to transmit an instruction to said second processing resource; and
10 said second processing resource is configured to execute said instruction for
said instruction satisfying a predetermined criterion, whereby said second processing
resource is restricted to implementing an instruction communicated from said first
processing resource which only performs a predetermined allowable operation, thereby
inhibiting compromise of said second processing resource.

15 4. A data processing system according to claim 3, said predetermined
criterion comprising said instruction being included in a predefined set of allowable
instructions for said second processing resource.

20 5. A data processing system according to claim 1, said predetermined
criterion comprising said instruction being identified as an allowable instruction for said
second processing resource.

25 6. A data processing system according to claim 2, said predetermined
criterion comprising said instruction being identified as an allowable instruction for said
second processing resource.

30 7. A data processing system according to claim 3, said predetermined
criterion comprising said instruction being identified as an allowable instruction for said
second processing resource.

8. A data processing system according to claim 3, said second processing resource configured to transmit an instruction fail message to said first processing resource responsive to said second processing resource determining said instruction failing to satisfy said predetermined criterion.

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9. A data processing system according to claim 7, said second processing resource comprising a database of executable instructions defining predetermined allowable functionality of said second processing resource.

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10. A data processing system according to claim 2, said second processing resource comprising a database of executable instructions defining predetermined allowable functionality of said second processing resource.

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11. A data processing system according to claim 3, said second processing resource comprising a database of executable instructions defining predetermined allowable functionality of said second processing resource.

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12. A data processing system according to claim 1, said instruction comprising a computer program procedure name.

13. A data processing system according to claim 2, said instruction comprising a computer program procedure name.

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14. A data processing system according to claim 3, said instruction comprising a computer program procedure name.

15. A data processing system according to claim 3, said second processing resource configured to provide a reply message to said first processing resource responsive to an instruction satisfying said predetermined criterion.

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16. A data processing system according to claim 1, said first processing resource comprising a storage medium configured to store said instruction in a queue prior to transmission to said second processing resource.

5 17. A data processing system according to claim 2, said first processing resource comprising a storage medium configured to store said instruction in a queue prior to transmission to said second processing resource.

10 18. A data processing system according to claim 3, said first processing resource comprising a storage medium configured to store said instruction in a queue prior to transmission to said second processing resource.

15 19. A data processing system according to claim 1, said instruction comprised in a message for transmission to said second processing resource.

20. A data processing system according to claim 2, said instruction comprised in a message for transmission to said second processing resource.

20 21. A data processing system according to claim 3, said instruction comprised in a message for transmission to said second processing resource.

22. A data processing system according to claim 19, 20 or 21, said first processing resource comprising a storage medium configured to store said message in a queue prior to transmission to said second processing resource.

25 23. A data processing system according to claim 22, said first processing resource configured to provide a message including an action code indicative of an instruction type included in said message.

30 24. A data processing system according to claim 23, said first processing resource configured to store said message in accordance with a priority assigned to said action code.

25. A data processing system according to claim 23, said first processing resource configured to store said message in accordance with their chronological order.

5 26. A data processing system according to claim 25, said first processing resource configured to select a stored message for transmission to said second processing resource in accordance with a priority determined by said action code of said message.

10 27. A data processing system according to claim 1, said first processing resource configured to transmit said instruction or a message including said instruction responsive to receiving a communication comprising sensitive information and to discard said sensitive information from said first processing resource.

15 28. A data processing system according to claim 2, said first processing resource configured to transmit said instruction or a message including said instruction responsive to receiving a communication comprising sensitive information and to discard said sensitive information from said first processing resource.

20 29. A data processing system according to claim 3, said first processing resource configured to transmit said instruction or a message including said instruction responsive to receiving a communication comprising sensitive information and to discard said sensitive information from said first processing resource.

25 30. A data processing system, comprising:
a first processing resource coupleable to a communications network; and
a second processing resource coupleable to said first processing resource;
said first processing resource configured to transmit a message to said second
processing resource responsive to receiving a communication via said network
30 comprising sensitive information, and further configured to discard said sensitive information from said first processing resource.

31. A data processing system according to any one of claims 27 to 30, said message representing sensitive information derived from said communication.

32. A data processing system according to any one of claims 27 to 30,
5 wherein said sensitive information is discarded in response to transmission of said message comprising sensitive information to said second processing resource.

33. A data processing system according to claim 32, said first processing resource configured to discard said sensitive information within a predetermined time
10 period.

34. A data processing system according to claim 33, wherein said time period is less than two minutes from receipt of said communication, preferably less than one minute from receipt of said communication, and more preferably the shortest possible
15 time from receipt of said communication.

35. A data processing apparatus, comprising:
a first processing resource coupleable to a communications network; said first processing resource configured to transmit an instruction to a second processing
20 resource disposed in a non-open network coupled data processing apparatus responsive to receiving a communication via said network and for said instruction satisfying a predetermined criterion.

36. A data processing apparatus according to claim 35, further comprising a
25 storage medium to store said instructions in a queue prior to transmission to said second processing resource.

37. A data processing apparatus according to claim 35, wherein said first processing resource is configured to form a message including said instruction for
30 transmission to said second processing resource.

38. A data processing apparatus according to claim 37, wherein said first processing resource is configured to form a message including an action code indicative of an instruction type included in said message.

5 39. A data processing apparatus according to claim 38, wherein said first processing resource is configured to store messages in accordance with a priority assigned to said action code.

10 40. A data processing apparatus according to claim 38, wherein said first processing resource is configured to store messages in accordance with their chronological order.

15 41. A data processing apparatus according to claim 35, said first processing resource configured to transmit said instruction or message responsive to receiving a communication comprising sensitive information and to remove at least that part of said communication comprising said sensitive information from said first processing resource.

20 42. A data processing apparatus, comprising:
a second processing resource configured to respond to an instruction received from another processing resource disposed in another data processing apparatus to execute only instructions satisfying a predetermined criterion.

25 43. A data processing apparatus according to claim 42, further comprising a database of executable instructions defining predetermined allowable functionality of said data processing apparatus.

30 44. A data processing apparatus according to any one of claim 35, said instruction comprising a computer program procedure name.

45. A data processing apparatus according to claim 35 or 44, said predetermined criterion comprising said instruction or computer program procedure

being included in a predefined set of allowable instructions or computer program procedures for said second processing resource.

46. A data processing apparatus according to claim 35 or 44, said
5 predetermined criterion comprising said instruction or computer program procedure being identified as an allowable instruction or computer program procedure for said second processing resource.

47. A method for operating a processing system including a first processing
10 resource and a second processing resource, the method comprising:

establishing a communications relationship between said first and second
processing resource whereby said second processing resource is restricted to
implementing an instruction communicated from said first processing resource which
only performs a predetermined allowable operation, thereby inhibiting compromise of
15 said second processing resource.

48. A method for operating a processing system including a first processing
resource and a second processing resource, the method comprising:

establishing a communications relationship between said first and second
20 processing resource; and

said first processing resource transmitting said instruction to said second
processing resource for said instruction satisfying a predetermined criterion, whereby
said second processing resource is restricted to implementing an instruction
communicated from said first processing resource which only performs a predetermined
25 allowable operation, thereby inhibiting compromise of said second processing resource.

49. A method for operating a processing system including a first processing
resource and a second processing resource, the method comprising:

establishing a communications relationship between said first and second
30 processing resource; and

said first processing resource transmitting an instruction to said second processing
resource, and said second processing resource executing said instruction only if said

instruction satisfies a predetermined criterion, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

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50. A method according to claim 49, said predetermined criterion comprising said instruction being included in a predetermined set of allowable instructions for said second processing resource.

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51. A method according to claim 47, said predetermined criterion comprising said instruction being identified as an allowable instruction by said second processing resource.

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52. A method according to claim 48, said predetermined criterion comprising said instruction being identified as an allowable instruction by said second processing resource.

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53. A method according to claim 49, said predetermined criterion comprising said instruction being identified as an allowable instruction by said second processing resource.

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54. A method according to claim 49, further comprising said processing resource transmitting an instruction fail message to said first processing resource responsive to said second processing resource determining said instruction failing to satisfy said predetermined criterion.

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55. A method according to claim 47, said second processing resource comprising a database of executable instructions defining predetermined allowable functionality of said second processing resource.

56. A method according to claim 48, said second processing resource comprising a database of executable instructions defining predetermined allowable functionality of said second processing resource.

5 57. A method according to claim 49, said second processing resource comprising a database of executable instructions defining predetermined allowable functionality of said second processing resource.

10 58. A method according to claim 55, further comprising said second processing resource comparing said instruction with said database of executable instructions for determining whether said instruction is an allowable instruction.

15 59. A method according to claim 56, further comprising said second processing resource comparing said instruction with said database of executable instructions for determining whether said instruction is an allowable instruction.

20 60. A method according to claim 57, further comprising said second processing resource comparing said instruction with said database of executable instructions for determining whether said instruction is an allowable instruction.

61. A method according to claim 47, said instruction comprising a computer program procedure name.

25 62. A method according to claim 48, said instruction comprising a computer program procedure name.

63. A method according to claim 49, said instruction comprising a computer program procedure name.

30 64. A method according to claim 47, further comprising said second processing resource providing a reply message to said first processing resource

responsive to said second processing resource determining that an instruction satisfies said predetermined criterion.

5 65. A method according to claim 47, further comprising said first processing resource storing said instruction in a queue prior to transmitting said instruction to said second processing resource.

10 66. A method according to claim 48, further comprising said first processing resource storing said instruction in a queue prior to transmitting said instruction to said second processing resource.

15 67. A method according to claim 49, further comprising said first processing resource storing said instruction in a queue prior to transmitting said instruction to said second processing resource.

19 68. A method according to claim 47, said first processing resource forming a message comprising said instruction and transmitting said message to said second processing resource.

20 69. A method according to claim 48, said first processing resource forming a message comprising said instruction and transmitting said message to said second processing resource.

25 70. A method according to claim 49, said first processing resource forming a message comprising said instruction and transmitting said message to said second processing resource.

30 71. A method according to claim 69 or 70, further comprising said first processing resource storing said message in a queue prior to transmitting said message to said processing resource.

72. A method according to claim 71, further comprising said first processing resource forming said message to include an action code indicative of an instruction type included in said message.

5 73. A method according to claim 72, further comprising said first processing resource storing said message in accordance with a priority assigned to said action code.

74. A method according to claim 72, further comprising said first processing resource storing said message in accordance with a chronological order.

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75. A method according to claim 74, further comprising said first processing resource transmitting a message to said second processing resource in accordance with a priority determined by said action code of said message.

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76. A method according to claim 47, further comprising said first processing resource transmitting said instruction or message in response to receiving a communication comprising sensitive information and discarding said sensitive information from said first processing resource.

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77. A method according to claim 48, further comprising said first processing resource transmitting said instruction or message in response to receiving a communication comprising sensitive information and discarding said sensitive information from said first processing resource.

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78. A method according to claim 49, further comprising said first processing resource transmitting said instruction or message in response to receiving a communication comprising sensitive information and discarding said sensitive information from said first processing resource.

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79. A method for operating a processing system including a first processing resource and a second processing resource, the method comprising: said first processing resource transmitting a message to said second processing resource responsive to

receiving a communication comprising sensitive information, and discarding said sensitive information from said first processing resource.

80. A method according to any one of claims 76 to 79, further comprising
5 said processing resource deriving sensitive information from said communication, and including said sensitive information in said message.

81. A method according to any one of claims 76 to 79, further comprising
10 said first processing resource discarding said sensitive information in response to a transmission of said message comprising said sensitive information to said second processing resource.

82. A method according to claim 81, further comprising said first processing
15 resource discarding said sensitive information comprising said sensitive information from said first processing resource within a predetermined time period.

83. A method according to claim 82, wherein said time period is less than 2
20 minutes from receipt of said communication, preferably less than 1 minute from receipt of said communication and more preferably the shortest time possible from receipt of said communication.

84. A data processing system comprising:
a first processing resource coupleable to a communications network;
a second processing resource coupleable to said first processing resource;
25 said first processing resource and said second processing resource configured to establish a communications relationship between them, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation;
said second processing resource further configured to initiate a command
30 mode for remote control of said first processing resource via said second processing resource.

85. A data processing system according to claim 84, said second processing resource configured to instruct said first processing resource to halt transmission of instructions to said second processing resource, responsive to initiating said command mode.

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86. A data processing system according to claim 84, said second processing resource configured to transmit command instructions to said first processing resource for controlling said first processing resource.

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87. A data processing system according to claim 86, said second processing resource comprising an instruction queue and wherein said command instructions are sent to said instruction queue via transmission to said first processing resource.

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88. A data processing system according to claim 84, said first processing resource and said second processing resource in communication via a dedicated link.

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89. A method for operating a processing system including a first processing resource and a second processing resource, the method comprising:

establishing a communications relationship between said first and second processing resources, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation; and

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said second processing resource initiating a command mode for remote control of said first processing resource via said second processing resource.

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90. A method according to claim 89, further comprising said second processing resource instructing said first processing resource to halt transmission of instructions to said second processing resource in response to said second processing resource initiating said command mode.

91. A method according to claim 88, further comprising said second processing resource transmitting command instructions to said first processing resource for controlling said first processing resource.

5 92. A computer program comprising computer r machine readable instructions, translatable for configuring a data processing apparatus or system to establish a communications relationship between said first and second processing resource whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a
10 predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

93. A computer program comprising computer or machine readable instructions, translatable or configuring a data processing apparatus or system to
15 establish a communications relationship between said first and second processing resource; and

transmit said instruction from said first processing resource to said second processing resource for said instruction satisfying a predetermined criterion, whereby said second processing resource is restricted to implementing an instruction
20 communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

94. A computer program comprising computer or machine readable instructions, translatable for configuring a data processing apparatus or system to
25 include a first processing resource and a second processing resource to establish a communications relationship between said first and second processing resource; and

transmit an instruction from said first processing resource to said second processing resource, and said second processing resource executing said instruction only if said instruction satisfies a predetermined criterion, whereby said second processing
30 resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

95. A computer program comprising computer or machine readable instructions, translatable for configuring a data processing apparatus including a first processing resource and a second processing resource, to establish a communications relationship between said first and second processing resources, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation; and

initiate a command mode for said second processing resource to remotely control said first processing resource via said second processing resource.

96. A computer program comprising machine or computer readable instructions for configuring a data processing apparatus or system including a first processing resource and a second processing resource to establish a communications relationship between said first and second processing resources whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

97. A computer program comprising computer or machine readable instructions for configuring a data processing apparatus or system including a first processing resource and a second processing resource to establish a communications relationship between said first and second processing resources; and

transmit said instruction from said first processing resource to said processing resource for said instruction satisfying a predetermined criterion, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of said second processing resource.

98. A computer program comprising machine or computer readable instructions for configuring a data processing apparatus or system including a first

processing resource and a second processing resource to establish a communications relationship between said first and second processing resources; and

- transmit an instruction from said first processing resource to said second processing resource, and said second processing resource executing said instruction only if said instruction satisfies a predetermined criterion, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation, thereby inhibiting compromise of the second processing resource.

99. A computer program comprising a machine or computer readable instructions for configuring a data processing apparatus or system including a first processing resource and a second processing resource to establish a communications relationship between said first and second processing resources, whereby said second processing resource is restricted to implementing an instruction communicated from said first processing resource which only performs a predetermined allowable operation; and

initiate a command mode for said second processing resource to remotely control said first processing resource via said second processing resource.

100. A carrier medium, carrying a computer program in accordance with any one of claims 92 to 99.

101. A carrier medium in accordance with claim 100, said carrier medium comprising at least one of the following:
- a solid-state memory;
 - a magnetic tape memory medium;
 - a magnetic disc such as a floppy disc storage medium;
 - an optical storage medium;
 - a communications carrier signal such as an RF carrier signal or optical carrier signal; and
 - an electronic signal.